

# Notice of Allowability

Application No.

10/677,160

Examiner

Devona E. Faulk

Applicant(s)

MODAFFERI, RICHARD T.

Art Unit

2615

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed 2/6/2006.
2. ☒ The allowed claim(s) is/are 1-10 and 13.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
  - \* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

- |                                                                                                                     |                                                                                        |
|---------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)                                                    | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment                    |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material          | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance   |
|                                                                                                                     | 9. <input type="checkbox"/> Other _____.                                               |

## DETAILED ACTION

### *Response to Arguments*

Applicant's arguments filed 2/6/2006 have been fully considered but they are not persuasive. The applicant asserts that while Modafferi discloses infinite slope technology, Modafferi fails to teach the relaxed lower slope of a high pass filter and of a relatively shallow lower frequency slope. The examiner asserts that Modafferi teaches of the claimed matter. Modafferi a high-pass filter (14, Figure 3; column 8, lines 30-33) operatively connected to said signal input and to said tweeter, said high-pass filter having a relatively shallow lower frequency slope (column 8, lines 25-20). The applicant's representative agreed to an examiner's amendment to place claims 1 and 7 in allowable form and agreed to cancel claims 11,12 as they were not allowable over the applicant's prior art.

### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with David L. Banner (Reg. 39,898) on 4/13/2006.

The claims are to be amended as follows:

**Claims 11 and 12:** cancel.

**Claim 1, line 10:** delete "effectively".

**Claim 1, line 11:** delete "infinite".

**Claim 1, line 11:** after "slope" insert - - that is greater than or equal to 120  
dB/octave - -.

**Claim 1, line 14:** delete "relatively shallow".

**Claim 1, line 14:** after "slope", insert - - less than 120 dB/octave - -.

**Claim 7, line 7:** delete "effectively".

**Claim 7, line 8:** delete "infinite".

**Claim 7, line 8:** after "slope" insert - - that is greater than or equal to 120  
dB/octave - -.

**Claim 7, line 10:** delete "infinite"..

**Claim 7, line 10:** after "characteristics", insert - - greater than or equal to 120  
dB/octave - - .

**Claim 7, line 13:** delete "infinite".

**Claim 7, line 14:** after "filter" insert - - to a lower frequency slope of less than 120  
dB/octave - -.

**Claim 9, line 6:** delete "infinite".

**Claim 9, line 7:** after "filter", insert - - to a lower frequency slope of less than 120  
db/octave - -.

2. **Claims 1-10 and 13** are allowed.

3. The following is an examiner's statement of reasons for allowance:

Regarding claims 1 and 7, prior art Modafferi (US 4,403,112), discloses a  
crossover network for a loudspeaker system (Figure 3) comprising: a low-frequency

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driver (woofer) (28, Figure 3, Figure 10; column 8, lines 30-33) and a high frequency driver (tweeter (20, Figure 3, Figure 10; column 8, lines 30-33) comprising: a low-pass filter (18, Figure 3, Figure 10) having a low-pass filter frequency response operatively connected to said signal input and to said woofer for providing substantially only low-frequency signals thereto, said low-pass filter comprising a pair of mutually-coupled coils (L8 and L9, Figure 3; column 9, lines 64-67) so as to generate a transmission zero in said low-pass filter frequency response so as to produce an effectively infinite (quasi-infinite, column 6, lines 28-44) upper frequency slope (column 9, lines 64-67); and a high-pass filter (14, Figure 3; column 8, lines 30-33) operatively connected to said signal input and to said tweeter, said high-pass filter having a relatively shallow lower frequency slope (column 8, lines 25-20). Prior art Combest (US 5,937,72) discloses an audio crossover circuit achieving a low-pass crossover slope in excess of 30dB/octave. Prior art Thiele (US 2003/0002694) discloses crossover filters and method. Prior art Kim (US 5,530,770) discloses multiple output transformers network for sound reproducing systems. Prior art Klipsch (US 4,237,340) discloses crossover network for optimizing efficiency and improving response of loudspeaker system. The prior art fails to disclose or make obvious a low pass filter frequency response so as to produce an upper frequency slope greater than or equal to 120 dB/octave and a high pass filter having a lower frequency slope less than 120 dB/octave. Therefore the prior art or combination thereof fails to disclose or make obvious a crossover network as claimed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Devona E. Faulk whose telephone number is 571-272-7515. The examiner can normally be reached on 8 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on 571-272-7848.

The Art Unit location of your application in the USPTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Art Unit 2615. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DEF



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